

Patent claims

1. Optical coupling device for cross-coupling light from a first optical waveguide (2) into a second optical waveguide (10), it being possible for the relative position of the two optical waveguide end faces in relation to each other to be influenced with the aid of a variable-length element (6, 26, 46, 66, 86) which holds the first optical waveguide (2) and the variable-length element (6, 26, 46, 66, 86) being fixed via a first holding element (8, 28, 48) to a structure containing the second optical waveguide (10) and having a guide device (18, 20) which permits the element (6, 26, 46, 66, 86) to lengthen only in a spatial direction oriented substantially parallel to the longitudinal axis of the element.
2. Optical coupling device, characterized in that the guide device has a second holding block (20, 38, 54, 72) as an abutment, on which the variable-length element (6, 26, 46, 66, 86) is guided parallel to its extension direction.
3. Device according to Claim 1, characterized in that the guide device has a ferrule (16) which is connected to the variable-length element (6) and is mounted in a hole in the second holding block (20) such that it can be displaced in the direction of the axis of the variable-length element in which the variation in length takes place.
4. Device according to Claim 2, characterized in that the ferrule (16) is guided in the second holding block via a sleeve (18).
5. Device according to Claim 1, characterized in that the guide device has a ferrule which is connected

to the second holding block and is mounted in a hole in the variable-length element such that it can be displaced in the direction of the axis of the variable-length element in which the variation in length takes place.

6. Device according to Claim 4, characterized in that the ferrule is guided in the variable-length element via a sleeve.
7. Device according to Claim 1, characterized in that the guide device is formed by a groove-(34)-and-tongue-(36) connection between the variable-length element (26) and the second holding block (38).
8. Device according to Claim 1, characterized in that the second holding block (54) has a U-shaped cross section, and in that the variable-length element (46) is guided in the U-shaped cross section of the second holding block (54).
9. Device according to Claim 1, characterized in that an abutment (72), which acts in a displaceable manner on the second optical waveguide (70), is fixed to the variable-length element (66).
10. Device according to Claim 6, characterized in that the abutment has, on one side, a spring (76) between one end of the abutment (72) and the second optical waveguide (70) and, on the other side, a setting screw (80) between another end of the abutment (72) and the second optical waveguide (70).